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Lessons from Catalyzing U.S. State (CA and MN) Electric Vehicle Regulations

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Summary

Sales mandates are a crucial way to catalyze uptake of electric vehicles and in the U.S. state-level action is especially important. California has set requirements for zero emission passenger vehicles ("clean car rules") and freight trucks (Advanced Clean Trucks rule). This paper combines lessons from California's 2020 adoption of the Advanced Clean Trucks rule and Minnesota's 2021 adoption of the clean car rules using research and input from ~50 local organizations involved in the wins. Key components include diverse local coalitions, effective communications, highlighting benefits including health, clear research, building political will, understanding decisionmakers, and showing support from businesses.

Keywords: Regulation, passenger car, freight transport, state government, EV (electric vehicle)

1 Background

The Zero Emission Vehicle (ZEV) standard, enabled under Section 209 of the United States' Clean Air Act, gives California the authority to adopt ZEV mandate for vehicles and allows other states (under section 177) to choose to follow California's lead and rules.

In June 2020, the California Air Resources Board adopted the Advanced Clean Trucks (ACT) Regulation to accelerate the adoption of Class 2b – Class 8 ZEVs requiring a percentage of all sales be zero-emission starting with model year 2024 (see Figure 1 for the sales requirements). This ACT rule was the first of its kind in the world to set regulations on the sales of zero emission trucks. Actions of local coalition partners nearly doubled the rule's stringency from proposal to final (Fig. 1).

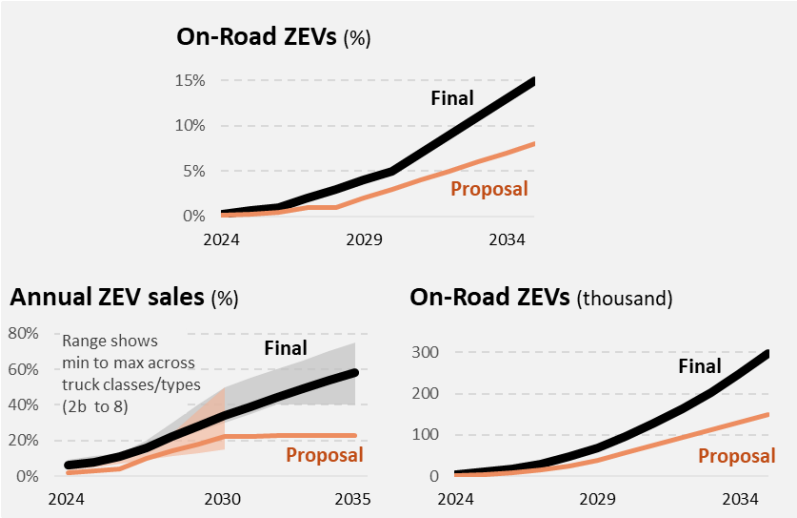

Figure 1: ACT policy change from proposal to final (underlying data from [1], summarized in [2])

In May 2021, the Minnesota Pollution Control Agency secured approval from an administrative law judge to adopt Zero Emission Vehicle (ZEV) and the Low Emission Vehicle (LEV) standards set by California, collectively "Clean Cars Minnesota," and the Governor finalized the adoption on July 26, 2021.

This paper explores lessons from these two wins, building on research and input from roughly 50 of the local organizations involved in the successes. Key components of success for both the CA ACT and the MN Clean Cars rule included building strong, diverse, and well-coordinated local coalitions; creating effective communications with diverse human stories; highlighting a myriad of benefits, including health benefits, especially to vulnerable communities, from addressing poor air quality; providing clear research and data; building political will; understanding decisionmakers and addressing concerns; and showing the voices of businesses, ranging from fleets to utilities.

These aspects of success are described more below.

2 Strong Coalition with Key Actions

Below are details on strong and diverse coalitions, supportive partner research and actions, and important messages and communications.

2.1 Diverse Coalitions

Essential in both wins in California and Minnesota was creating strong, diverse, and well-coordinated local coalitions. Coalitions had ~20-30 groups participating, supported by leadership and coordination from a smaller set of groups.

- **Local environmental groups** provide essential understanding of local issues and concerns and were important to show local support, including through members of civil society groups or EV owner associations. Sometimes local groups also had helpful legal expertise in rulemaking.
- **Cross-state environmental groups** provide continuity of work in other states or regions, underlying research (see Section 2.2 for details on topics), understanding of rule-making processes, technical assistance, and often played leadership roles in the coalitions.

[Evaluating] "cost savings for Minnesota families from the LEV standards... found that the average Minnesota family would save between $159 and $460 per year in fuel costs and between $950 and $2,770 during the time they own a model."

- Consumer Reports, Minnesota Rule Public Comment Letter, Mar 15, 2021 [3]

- **Environmental justice and equity** groups bring justice to the forefront, show the voices of the community, especially through routes such as in-person testimony during rulemaking (see below for a quote from the ACT hearing), op-eds, and research, and highlight benefits to vulnerable communities. For the ACT, significant in-person testimony, especially from local communities, at the December Board meeting was particularly powerful. Other ways EJ groups can engage include community research, such as truck counts.

"Children and adults living in close proximity to diesel pollution have poorer health outcomes, including increased cancer risk and premature mortality. A bold zero-emissions rule here will become a model and a beacon of hope for freight impacted regions across the country and across the globe. I urge you to act with urgency, and prioritize environmental justice by adopting the most aggressive medium- and heavy-duty truck mandate possible; prioritize public health in diesel death zones; aim higher, because our lives depend on it."

- Candice Kim, Moving Forward Network (December ACT hearing, [4])

"The Center for Community Action and Environmental Justice did truck counts with volunteers on State Route 60 near an Amazon hub, counting 1,161 trucks in a single hour. The group presented this at a state regulatory hearing" [5]

- **Health** advocates bring credibility and attention to the adverse health impacts of fossil-based transportation. Specific ways of support can include research, op-ed authoring, testimony, and communications support on messaging related to health.

"Poor air quality damages lungs. We are in the middle of a pandemic that can cause severe damage to lungs… This is no time to get our priorities wrong. We need to do everything we can to clean up our air for the health of our planet and all living beings."

- Susan Landberg, Public Comment, Feb 20, 2021 (MN Clean Cars [6])

- **Labor** and worker involvement can highlight good new jobs (such as in EV charging infrastructure) while avoiding putting the economic burden of EVs on truck drivers. For ACT, labor engagement showed that California has the needed electrical contractor expertise near-term and in the longer-term would see more good jobs. Additionally, action on reporting requirements related to large fleets laid the groundwork for fleet rules to support truck drivers.
- **Faith and rural** groups were especially important in Minnesota. Faith groups provided an important faith perspective for action and were sometimes linked with environmental justice concerns. Rural audiences were reached through local partners and radio.
- **Businesses** can voice support for climate and EV actions, and can be powerful voices especially in conservative arenas. For the ACT, showing utilities backing demonstrated that the utilities are willing and able to build the necessary infrastructure, and support from progressive EV truck makers, businesses demanding clean goods movement, and demand from big fleets provided confidence for action. Fig. 2

shows example business support from large businesses and investors (such as IKEA, Nestle, Siemens, and Unilever) in a letter urging states to take action on ACT (*note this was after the ACT in California)*.

Figure 2: Example business support for the MN Clean Car rules and ACT rules in other states [6 and 7]

"The coalition did an amazing job at rallying true community voices that are overburdened by pollution and deserve zero emissions now. It was the most compelling call to arms I have ever seen. Without this, the ACT would not have been as strong as it is."
- California Government Official regarding ACT rule

2.2 Supportive partner research and actions

Providing clear research and data on key topics was an important part of success. Especially as new topics came up, it was helpful to have underlying data to address questions. Fig. 3 shows the helpful background material and partner research in California in Minnesota and Fig. 4 shows example research related to air pollution.

For truck policies, especially where health outcomes are significantly affected, health and emissions were the most important aspects, though many issues were important – including emission reductions, model availability, cost of ownership, and economic and job impacts. For passenger vehicle work, climate and health are key drivers, as well as addressing questions related to increasing vehicle model availability and reduced cost of ownership.

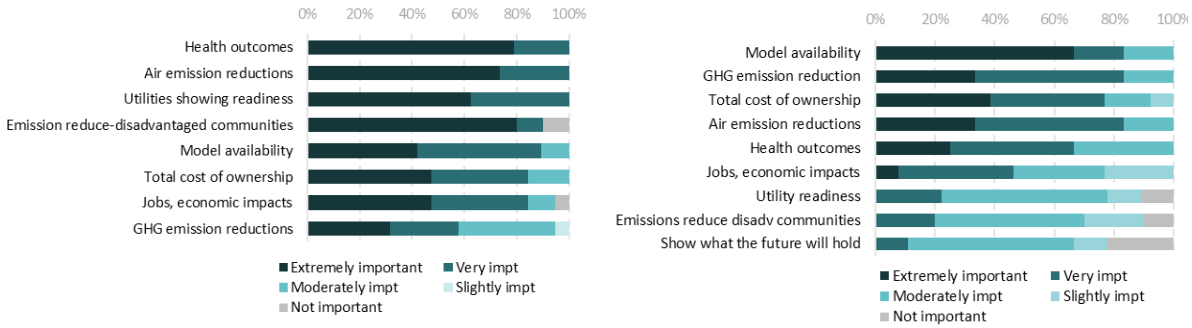

Figure 3: Helpful background material and partner research in California (left) in Minnesota (right).
(Values show percent of survey respondents scoring importance. *Survey respondents were civil society organizations and relevant policymakers in the coalitions and policy work, including local and national environmental groups, environmental justice, equity, faith, health, communication, labor groups, EV owner groups, business-focused groups, utilities, policymakers, and other experts. For ACT, there were 22 survey respondents and for MN there were 14 respondents*)

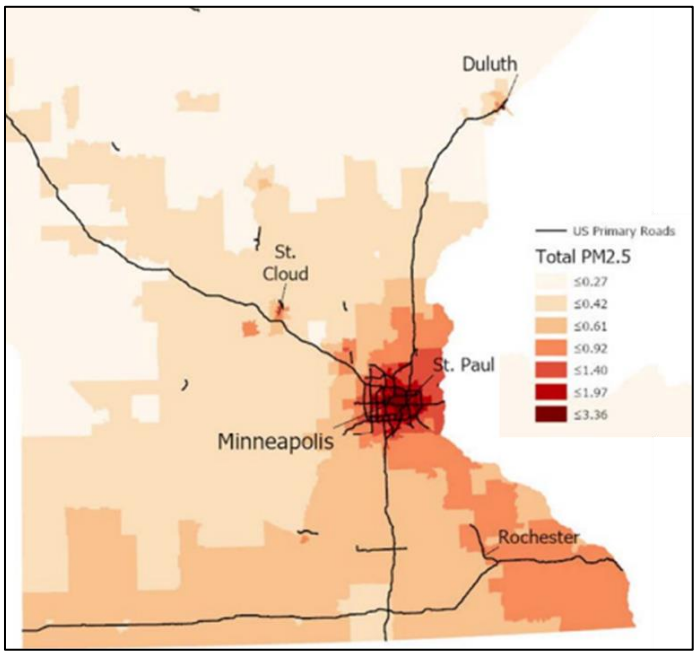

Figure 4: Example air pollution map submitted in Minnesota displaying particulate matter (PM2.5) pollution from cars, trucks, and buses on Minnesota roads ([8])

2.3 Important messages and communications

Every campaign relied on creating effective communications with diverse human stories, building political will countering mis-information, and highlighting a myriad of benefits, including health benefits, especially to vulnerable communities, from addressing poor air quality. Communications experts familiar with transportation and EVs were important contributors. Broadly, coalitions benefitted from being prepared with strong, frequent, and early communications.

Fig. 5 shows effective messages in California and Minnesota. Similar to the background materials, communications centered around health, clean air, and emissions for trucks, while the passenger vehicle communications highlighted slightly different priorities. For ACT, the coalition was able to connect community groups whose influential stories about living in diesel death zones gave the issue a human face with receptive decisionmakers and the public. By developing strong public support and community pressure, the Minnesota coalition united urban and rural proponents and used compelling communications that highlighted climate and emission reductions, consumer choice, and air quality benefits, and generally countered misinformation.

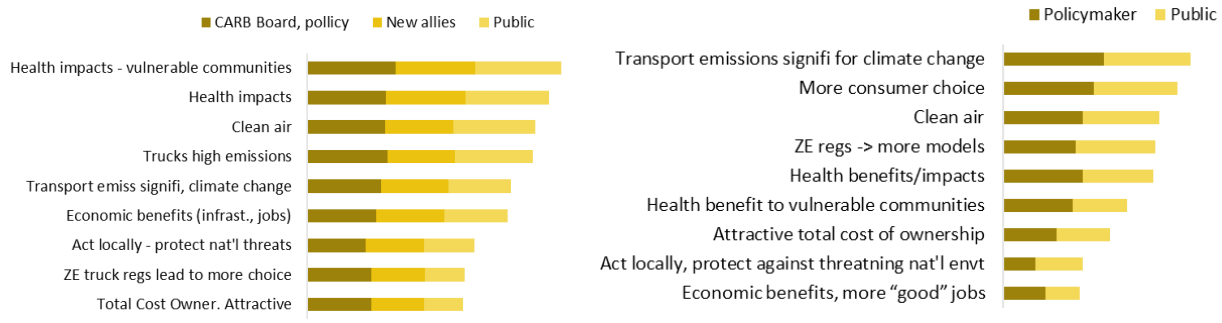

Figure 5: Effective messages in California (left) and Minnesota (right)

Fig. 6 shows examples of communications materials related to ACT.

Figure 6: Example communications for the Advanced Clean Trucks rule adoptions [9]

Broadly, it was important to understand the audiences – ranging from policymakers, newer coalition allies, or the general public – and create communications tailored to the audiences, their important issues, and any concerns

they might have. Considering messengers was also important – be it hearing from communities impacted by pollution, rural voices, businesses, utilities, or others. Important venues included in-person testimony (see example testimony from Section 2.1), editorials, social media, and radio, complemented by central websites for all to find more information, grounded in facts. In Minnesota, over 70 people testified, with a ratio of ~10:1 in support of the rule.

3 Lessons

Below are summary lessons across the two successes in California and Minnesota, with an eye to encourage other states and decisionmakers around the world to act on ambitious EV polices:

- **Create a well-coordinated, diverse, and invested coalition, with clear asks of policymakers**. Include many types of groups, including local environmental groups, health and equity advocates, labor and workers, faith groups, communications experts, supportive businesses, and others. Include roles for all coalition members within the workstreams, and grow the capacity of local groups with each policy campaign.
- **Provide clear research and data** addressing key questions, including vehicle costs, total cost of ownership, vehicle model availability, health impacts, economics, and job opportunities.
- **Get the word out with strategic communications** that highlight diverse personal stories, benefits to vulnerable communities, and support of the public. Be prepared with frequent, strong, and early communications, including addressing any mis-information. Personalize the messaging to the local issues. Create a constant drum-beat of positive stories.
- Wherever possible, **highlight business support**. This can include demand from big fleets, utility backing (and related local jobs that can be created), announcements on EV makers (and related job creation if applicable), and general businesses demanding clean goods movement and EV options.
- **Continue to engage audiences, even after a policy is passed**. Support built can lead to additional and complementary policy work (such as on charging infrastructure), or defense of the specific policy.

Momentum is continuing with other states adopting Clean Car Rules and the Advanced Clean Trucks rule. In 2021, in addition to Minnesota, Virginia, Nevada, and Washington adopted Clean Car Rules, and Oregon, Washington, New Jersey, New York, and Massachusetts adopted the ACT rule. Positively, many more states are also on the path to adopting these EV-market catalyzing regulations.

Acknowledgments

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Val Hovland (Hovland Consulting) helps foundations and non-profits improve the world's environment and communities, focusing on clean transportation and climate change abatement. Using data-driven insights derived from strong analytics, research, modeling, expert input, and geographic information, Hovland Consulting helps clients make informed decisions; tell stories with compelling visuals, maps, and charts; track and improve performance; invest wisely to achieve goals; increase equity, inclusion, and diversity; and facilitate growth. Val Hovland has a Master of Science and Bachelor of Science in mechanical engineering from the Massachusetts Institute of Technology. She works extensively with the Drive Electric Campaign at the ClimateWorks Foundation, supports its global Advisory Group, and works with other foundations and non-profits. http://www.hovlandconsulting.com/